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ABSTRACT

This study evaluated differences in teacher and student perceptions about communication patterns within classrooms and the effect of a teacher-student communication system, the Learning Expressways System, on teacher-student communication. High school teachers who had or have had students with disabilities in their classes participated. In the first study, 17 teachers and students in 1 or 2 of the teachers' classes were surveyed using the Being Known Survey. This instrument required students to rate the teacher's behavior, and the teacher's version required teachers to rate their own behavior. In the second study, 6 teachers used the Learning Expressways System for 6 weeks in 1 of 2 randomly assigned classes. Results showed that teachers overestimated the connections they had made with their students, especially about problems. In the Learning Expressways style, students and teachers described some improvement in making connections after the system was implemented. Feedback from students and teachers suggested that the time interval for which the intervention was in use should have been longer than 6 weeks, and they recommended changes in the communication system. For example, they suggested that a number of conversation starters be designed that teachers could use to stimulate dialogues with students. Appended are: Student Being Known Questionnaire; Teacher Being Known Questionnaire; Being Known Questionnaire: Student versus Teacher Comparison; and Learning Expressways Feedback Survey. (Contains 17 references and 3 tables.) (Author/CR)

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Research Report #12

The effects of ongoing communication between teachers and adolescents with disabilities

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IDEAs that Work
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Abstract

The purpose of this experimental study was to evaluate the following: (a) differences in teacher and student perceptions about communication patterns within classrooms, and (b) the impact of a teacher-student communication system, called the Learning Expressways System, on teacher-student communication. High-school teachers in Seattle-area schools who had or have had SWDs in their classes participated. In the first study, 17 teachers and students in one or two of the teachers' classes were surveyed using the Being Known Survey. This instrument contained 24 matching items. The student version required students to rate the teacher's behavior, and the teacher's version required teachers to rate their own behavior. In the second study, six teachers used the Learning Expressways System for six weeks in one of two randomly assigned classes, with the other class acting as a comparison class. The results of the survey showed that teachers overestimated the connections they had made with their students, especially about problems. In the Learning Expressways study, students and teachers described some improvement in making connections after the system was implemented. Feedback from students and teachers suggested that the time interval for which the intervention was in use should have been longer than six weeks, and they recommended changes in the communication system. For example, they suggested that a number of "conversation starters" be designed that teachers could use to stimulate dialogues with students. Their feedback was instrumental in modifying the Learning Expressway System for future studies.

High schools have been characterized as being lonely places for students, especially for students with disabilities. Teachers do not know students, and students do not feel known. A recent survey (Blum, McNeely, & Rinehart, 2002) found that 31% of students do not feel connected to school. Guidelines for making schools "safe places" emphasize developing positive academic relationships between teachers and students (Burns & Callihan, 1980; Dwyer, Osher, & Warger, 1998). Dwyer et al., for example, have argued that students need to feel safe when expressing their needs, fears, and anxieties to school staff. They also predicted that when students do not have access to caring adults, feelings of isolation, rejection, and disappointment are most likely to occur, increasing the probability of acting-out behaviors.

Positive academic relationships between teachers and students are difficult to develop in secondary schools. Research has shown that teachers often do not even know that a student has a disability, is frustrated, or is having trouble learning until well into the semester when patterns of failure have long been established (Lenz & Trent, 1994). Even then, teachers are not likely to seek out information about the student if the task of getting information from counselors, teachers, or parents is daunting (Lenz & Trent, 1994). From the student's point of view, getting to know teachers or being able to ask questions or explain problems or frustrations is almost impossible in high-school settings (Lenz & Trent, 1994). Nevertheless, information about students with disabilities and their questions and frustrations should be a key resource used by teachers to shape their planning and instruction.

However, *how* can teachers learn more about their students with disabilities as learners, and *how* can teachers have continuing conversations with their students? These are challenges that teachers face every day in their classrooms. Students have singular learning needs and excel in different ways, but assessing the needs of each student in a class is difficult. However, having knowledge about individual students' needs could potentially enhance the success of students disabilities in a significant way because teachers would be able to plan more effectively for instructing those students.

Although better communication is often mentioned in the Safe Schools and dropout literature (e.g., Raywid & Oshiyama, 2000), independent ERIC/PsychLit searches by Keith Lenz and Gary Adams (of the University of Kansas) and Tara Ebey (of Washington State University) only found citations involving teacher-student communication through the use of portfolios (e.g., Burke, 1998; Paris & Ayres, 1994). None of the three researchers could find any research on a comprehensive communication system designed to get student feedback to improve teacher planning.

To address the challenge of knowing students and improving teacher planning through student feedback, two studies were conducted. The first study focused on comparing student and

teacher perceptions of the communication process for both students with and without disabilities. The second study focused on the effects of implementing a system to increase teacher-student communication. In this study, a simple folder called the Learning Expressways (LE) Communication System (Lenz, Adams, & Fisher, 1994) was used by teachers to communicate regularly with students. The purpose of the research was to answer the following research questions:

1. Do teachers and students see the existing communication process similarly (Study 1)?
2. Are there significant differences in communication responses between general education and special education students? (Study 1)
3. Does the use of the Learning Expressways System have a positive impact on students feeling connected to their teachers in comparison to students who did not receive the Learning Expressways System intervention (Study 2)?
4. What was the pattern of communication between teachers and students that could impact teacher planning based on the Teacher-Student Comments Sheets from the Learning Expressways System (Study 2)?

Study 1

Method

Participants

The participants who took the teacher-student relationship survey were 3 special education teachers and 16 general-education high school teachers of inclusive classes in which students with disabilities were either currently enrolled or had been enrolled in the past. These classes also represented the core curriculum classes where students with disabilities would be enrolled as inclusion is implemented in the future. Each teacher administered the survey to students in one or two classes, depending if they had nonequivalent classes. The total sample for this study was 392 students (347 general education students and 45 special education students). The ethnicity of the students was 53% African American, 33% Asian American, 5% Hispanic, 1% Native American, and 8% white. A total of 56% of the students received free/reduced lunch. Also, a total of 14% receive special education services and 16% receive ESL services.

Because of the way the surveys were administered in several classes, some students were surveyed more than one time (e.g., a student with disabilities could be surveyed in his general education and special education classrooms). However, in each administration, the students were reporting their perceptions about the class in which they were present at the time of the administration. The total number of student responses to the survey was 594 responses (529 for general education students and 65 for students with disabilities).

The students were attending a school that was located in an urban area of Seattle, Washington. State testing for 10th graders at this school showed the following results for the percentage of students passing: Math=11%, Writing=26%, and Reading=29%. These scores are the lowest in the Seattle-Puget Sound area.

Measures

The primary measurement instruments for this study were the teacher and student versions of the *Being Known Survey*. These instruments were designed to measure teacher and student "connectedness;" that is, how well teachers and students knew each other. The surveys consisted of 18 matching items written from a teacher and student perspective. The example below shows the teacher and student versions of item 11 on their respective surveys:

- **Student version:** How likely is it that this teacher knows your strengths and weaknesses?
- **Teacher version:** How likely is it that you know your students' strengths and weaknesses?

  1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

Respondents rated each item on a 5-point Likert scale. The items of the student survey were field-tested with students in another school district and then modified before this survey was used in this study. This was the first time the teacher version was used. See Appendix A for the student version of the Being Known Survey and Appendix B for the teacher version of the Being Known Survey.

Procedures

The study was conducted during the last quarter of the school year after teachers had three quarters of the school year to learn about and connect with students in traditional ways. The Being Known Surveys were administered the week before the second study began. Project staff administered the Being Known Surveys to students. Staff met with each participating class and read instructions from a standardized script. Staff provided information about informed consent and survey completion. Also, they answered any questions.

Results

Teacher versus student responses. The first study compared the responses of teachers and students on their versions of the Being Known Survey. Appendix C shows the teacher and student means for the 18 Being Known Survey items. The MANOVA analysis conducted by using SPSS was employed because there were multiple measures (items). An alpha level of .05 was used for all statistical tests. This statistical procedure is liberal, but it was used because this is study is searching for possible differences in this first field-testing of this instrument. Statistical differences were found between student and teacher reports for items 11 and 18. The

following shows those items with the difference in wording per version, the means, and the statistical analysis results for Items 11 and 18:

Item 11

- Student Version: How likely is it that this teacher knows your strengths and weaknesses (Mean=3.08)
- Teacher Version: How likely is it that you know your students' strengths and weaknesses (Mean=3.94)

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

($F=8.82$, $p < .01$)

Item 18

- Student Version: How often do you let the teacher know a problem that concerns you? (Mean=2.51)
- Teacher Version: How often does one of your students let you know about a problem that concerns you? (Mean=3.67)

1=Never 2=More than Monthly 3=Monthly 4=Weekly 5=Daily

($F=10.87$, $p < .001$)

The difference between teacher and student responses to Item 8 ("How likely is it that you would share an in-school problem with this teacher?") bordered on achieving statistical significance ($F=3.81$, $p<.052$). The mean score for students was 2.89, and mean score for teachers was 3.50.

Comparison of responses by students in general education versus special education classrooms. Table 1 provides the mean scores for the general education students and teachers in general education classes in comparison to the special education teachers and students in special education classes. The comparison of responses on the Being Known Survey between students in general education versus special education classrooms was based on a MANOVA analysis conducted by using SPSS. The general education classrooms included students with and without disabilities. Of the 18 items, statistically significant differences were found on six items: items 9, 10, 13, 14, 15, and 16. In each case, the scores for the students in special education classrooms were higher than for students in general education classrooms. The following shows those items with the difference in means and the statistical results.

Item 9. How likely is it that you would share an out-of-school problem with this teacher?

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

Mean Spec Ed Student Rating: 3.16 Mean General Ed Student Rating: 2.62

($F=6.95$, $p < .01$)

Item 10. How likely is it that this teacher knows your goals for the future?

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

- Mean Spec Ed Student Rating: 3.50 Mean General Ed Student Rating: 2.93

($F=8.04$, $p < .01$)

Item 13. How likely is it that you would let this teacher know if you felt alone or rejected by others?

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

- Mean Spec Ed Student Rating: 3.34 Mean General Ed Student Rating: 2.66

($F=10.99$, $p < .01$)

Item 14. How likely is it that you would let this teacher know if you were thinking about doing something harmful or illegal?

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

- Mean Spec Ed Student Rating: 2.95 Mean General Ed Student Rating: 2.34

($F=8.99$, $p < .01$)

Item 15. How likely is it that you would let this teacher know you were worried over how much trouble you were getting into during school?

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

- Mean Spec Ed Student Rating: 3.32 Mean General Ed Student Rating: 2.79

($F=6.89$, $p < .01$)

Item 16. How likely is it that you would let this teacher know if you were really angry at others and did not know what to do?

1=Very Unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very Likely

- Mean Spec Ed Student Rating: 3.39 Mean General Ed Student Rating: 2.81

($F=8.23$, $p < .01$)

Table 2 provides the mean score results for students in general education classrooms and students with disabilities in general and special education classrooms. A statistical comparison between students in the two classrooms settings was not completed on these data because of the small sample sizes (n=20 in special education classrooms and n=26 in general education classrooms).

Discussion

There were some significant differences in perceptions between the teachers and students who were surveyed on the Being Known Survey. Teachers thought that they knew students' strengths and weaknesses much more than students believe. Also, teachers stated that students would be willing to come forth with their problems more than students expressed. There may be a problem interpreting the results of this second finding ("How often do you let the teacher know a problem that concerns you?"). Although the comparison between teacher and student scores

reached statistical significance, comments from respondents indicated that the wording of the item was confusing. To some, the phrase "More than Monthly" (the number 2 rating) meant more frequently in a month (e.g., every 3 weeks), and to others it meant more than a month (e.g., 6 weeks). Because of the possible confusion, the results for this item should be interpreted with caution. This item was reworded for the revised versions of these surveys.

A review of the items' mean scores shows some interesting results. Both the highest- and lowest-rated items for teachers and students were the same items. The highest mean scores for teachers (4.11) and students (3.87) was Item 1 ("How satisfied are you with the way that this teacher respects how you are different from other students?"). This finding supports the belief that teachers deal with students as individuals. Teachers believe that they respect student differences, and students have indicated that teachers respect student diversity to some extent. The lowest mean score for teachers (2.33) and students (2.41) was Item 14 ("How likely is it that you would let this teacher know if you were thinking about doing something harmful or illegal?"). Considering the notoriety about the importance of safe schools, the lack of unwillingness to talk to teachers about possible dangerous situations is alarming. This finding highlights the need for an ongoing teacher-student communication process.

With regard to the comparison between the responses of students in general education and special education classrooms, the analyses revealed statistically significant differences for one-third of the items (6 of 18 items). In most cases, the students with disabilities were describing their teachers in special education classes. Item 10 targeted the issue of student goals ("How likely is it that this teacher knows your goals for the future?"). A possible reason why students with disabilities in special education classrooms scored higher than students with and without disabilities in general education classrooms may be because special education teachers participated the IEP process in which each student's goals and objectives are specified. In contrast, general education teachers often do not know the goals of the 100-150 students they are teaching.

The other five items are related to social behavior (see below):

Item 9. How likely is it that you would share an out-of-school problem with this teacher?

Item 13. How likely is it that you would let this teacher know if you felt alone or rejected by others?

Item 14. How likely is it that you would let this teacher know if you were thinking about doing something harmful or illegal?

Item 15. How likely is it that you would let this teacher know you were worried over how much trouble you were getting into during school?

Item 16. How likely is it that you would let this teacher know if you were really angry at others and did not know what to do?

A review of Table 2 in which special education students in special education and students in general education classes are compared shows a similar pattern. There are several possible reasons for the statistically significant differences between students. Two of the most obvious reasons are class size and teacher-student history. Because special education classes contain fewer students than general education classes, there are more interactions between teachers and students in special education classes. Also, many students with disabilities have several classes with the same special education teacher and may have had that teacher for many classes from their freshman to senior years. Because of that bond, these students may be more willing to talk about in- and out-of-school problems.

Study 2

Method

Participants

In the second study, six of the 19 teachers who participated in Study 1 were involved in the full implementation of the Learning Expressways System. Each of the six teachers had at least two equivalent classes. One of the each teacher's classes was randomly assigned to the Learning Expressways condition, and the other class did not receive the Learning Expressways intervention. A total of 150 students with informed consent (61 males and 89 females) participated in this part of the study: 33 freshmen, 57 sophomores, 37 juniors, and 2 undeclared students. Of the 150 students, four students with disabilities were involved. Two of the students were in two general education classrooms, thus providing 6 possibilities for student sampling of students with disabilities. Through the random assignment process, all 6 responses by students with disabilities were in the control classes condition. For this reason, evaluating the use of the Learning Expressways System by students with disabilities was not possible.

Materials

The Learning Expressways Communication System consists of a folder containing printed sections within which a student records his or her schedule, information about course and life goals, learning preferences, strengths and challenges, and academic support systems. The teacher introduces the folder and leads students through initial completion of sections on the folder at the beginning of a course. Weekly, the teacher distributes the folder and includes Teacher-Student Comments Sheets that provide 2 x 3 inch spaces for the student to write a message about his or her learning and then to rate his/her learning for the day on a 5-point Likert-type scale. The teacher collects the folders with the form containing the students' messages. During planning time, the teacher reads the students' messages and writes a response designed to increase learning outcomes. During initial implementation of the system, most teachers can respond to a class of 30 students within 25 to 30 minutes; however, after teachers become experienced with the system, written responses require approximately 15 minutes or less

for a class of 30 students. Teachers can use the system in a different class each day or target particular classes to improve communication.

Measures

The Teacher-Student Comments Sheets were the permanent products created through the use of the Learning Expressways System. These sheets contained the written interactions between students and teachers. They were collected by the researchers. Each teacher and student response was coded for affect (1=positive, 0=neutral, and –1=negative) and for intent of the comment (1=classroom instructional and 0=non-instructional). If the comment was directly related to classroom instruction (e.g., "I didn't understand your examples about mitosis."), the intent of the comment was coded as a 1 (classroom instructional). If the comment was not about the classroom content (which usually meant it was a personal message) (e.g., "Are you going to tonight's basketball game?"), the comment was coded as a 0 (non-instructional). Affect codes were positive ("I can tell you are really trying."), neutral ("Your assignment is due tomorrow."), or negative ("You are late as usual. Please be on time.")

Other measures for this study were the teacher and student versions of the Being Known Surveys (described above) and the Learning Expressways Feedback Survey. The feedback survey consisted of six items eliciting comments from the teacher about changes in planning and teaching because of the system, the value of the system to them, positive features of the system, and suggested changes, The Learning Express-Ways Feedback Survey is provided in Appendix D.

The teacher responses provided on the Learning Expressways Feedback Survey were analyzed to determine the degree to which teachers indicated that they had changed their planning or teaching as a result of the information gained from the use of the Learning Expressways folders. Responses were first scored as either positive about the use and impact of the system, negative, or neutral. Next, responses were scored as to whether or not they related to the influence of the system on the teachers' planning and teaching. Then, responses related to planning and teaching were scored as indicating either that the system had positively influenced the teacher's planning and teaching or that the teacher's planning had not changed as a result of system usage, or was a neutral comment. Interscorer reliability was determined by having two independent sorters categorize the teachers' comments into pre-assigned categories. The percentage of agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. The total percentage of agreement for the sorting task was 98% (1956 agreements out of 1996 opportunities to agree.)

Project staff administered the Being Known Surveys at the beginning and end of the study to teachers and students. They administered the Learning Express-Ways Feedback Surveys at the mid-point (after three weeks) and at the end of the study (after six weeks). Also, project staff evaluated each student's Learning Expressways folder for implementation fidelity.

Design

Six teachers were involved in the full implementation of the Learning Expressways system. All of these teachers had at least two equivalent classes. One of each teacher's two classes was randomly assigned to the Learning Expressways condition, and the other class did not receive the Learning Expressways intervention. The length of the intervention was six weeks. Pre- and post-test surveys and questionnaires were administered to both groups. Pre-test scores on the Being Known Survey were used as a covariate for the statistical analysis.

Procedures

Teachers received a two-hour inservice on the Learning Expressways System based on a training manual developed by project staff. During training, the Learning Expressways System was explained and modeled. Through role playing activities, teachers tried out the system and the trainers answered any questions. Teachers were expected to start implementation immediately and ask for student feedback via the Teacher-Student Comments Sheets once a week.

After three weeks, project staff met with the participating teachers. The teachers provided implementation information and talked about Learning Expressways System's strengths and weaknesses, as they perceived them at the midpoint of the project. The Learning Expressways Feedback Survey was also administered at this point.

At the end of six weeks, posttest data were collected from students and teachers. Project staff met with each classroom of students and readministered the Being Known Survey using the same script that was used for the pretest process. Teachers filled out their version of the Being Known Survey and then met with project staff to describe their experiences and complete the Learning Expressways Feedback Survey.

Results

The Being Known Survey data collected from students who did and did not use the Learning Expressways Communication System were analyzed using a MANOVA analysis using SPSS with the pretest scores as covariates. This analysis was used because there were 18 dependent variables (items). An alpha level of .05 was used for all statistical tests. There was a statistically significant difference between the groups in response to Item 17. Students in the experimental group in comparison to the control group stated that their teachers asked for ideas to improve his/her teaching more frequently [$F(1, 148) = 7.67$, $p < .01$].

Another analysis was of the affect and content by teachers and students on the Comment Form in the Learning Expressways System. Table 3 shows the type of student and teacher responses (i.e., instructional and noninstructional) and the ratings of affect (i.e., positive, neutral, and negative) for each. For both teachers and students, approximately one third of their comments were about classroom instruction.

The difference was in affect. Approximately two-thirds of the teachers' comments were positive in comparison to about one third of the students' comments. Additionally, the percentage of negative comments for students was approximately three times higher than for teachers.

Across the six teachers participating in this study, 78 statements were generated in response to the questions on the Learning Expressways Survey at the midpoint check, and 91 statements were generated in response to the questions at the end of the study. An analysis of the 78 responses to the survey at the study's midpoint indicated that 38% of the responses were positive toward the use and impact of the system, 10% were negative, and 52% were neither negative or positive in nature. Of the 78 statements, 50 or 64% of the statements were related to the influence of the system on planning and teaching, Of the 50 statements related to planning and teaching, 62% of the statements indicated that the system had positively influenced their planning and teaching, 14% of the statements indicated that their planning had not changed, and 24% of the statements were neutral or could not be categorized. Twelve percent of the 50 statements related to planning and teaching indicated that the system helped them to individualize or get to know individual students better.

An analysis of the 91 responses to the survey at the send of the study indicated that 78% of the responses were positive toward the use and impact of the system, 7% were negative, and 15% were neutral in nature. Of the 91 statements, 70 or 77% of the statements were related to the influence of the system on planning and teaching, Of the 91 statements related to planning and teaching, 92% of the statements indicated that the system had positively influenced their planning and teaching. Three percent of the statements indicated that their planning had not changed, and 4% of the statements were neutral or could not be categorized. One quarter of the statements indicated that the system helped them to individualize or get to know individual students better.

Discussion

This study showed that teachers in general education classrooms could use the Learning Expressways System and were, in general positive about it. The ratings of students in the experimental classes about whether their teachers asked for ideas about improving their teaching were significantly higher than the ratings of students in the control classes. Although the purpose of this study was to conduct an initial field-test the existing version of Learning Expressways System, the frequent complaint by teachers and students was that Learning Expressways System should have been used for a longer period of time to get a better feel for the impact of its use.

The analysis of teacher and student comments showed a problematic pattern. Only about one-third of the comments of teachers and students focused on classroom issues. This percentage would have been even lower if comments about one major topic had not been included (i.e.,

students asking about their current grades and teachers often commenting but not actually telling them their grades [e.g., "I'll let you know."]). Some teachers did not use a clear grade reporting system, and that problem often lead to negative student comments. Student questions about grades often started out as neutral questions (e.g., "How am I doing?"), but when the teacher did not provide the information, the student comments sometimes became negative, possibly because the teacher did not appear to be providing the requested information. Also, although approximately two-thirds of the teacher comments were positive, they tended to be non-specific non-instructional comments (e.g., "Good job"). In many cases, it appeared that the teachers did not know what to say to start and continue an on-going conversation. They did not know how to draw students into an ongoing conversation about instructional concerns. Teachers also voiced concerns about this problem in the mid-term and post-test teachers' meetings. They suggested that the authors of the system create a set of questions and comments that could be used as a guide for improving the quality of the interactions. One of the solutions, however, seemed obvious. When a student had asked for information, the teacher should have answered the question by providing the information. Too often, the teachers said that they would get the information but did not (as shown by the fact that the student would again ask the same question).

Overall, the analysis of teacher and student written comments in the Learning Expressways Communication System indicated that many teachers communicated poorly with or did not know how to effectively communicate with students, did not use information that they had gained in communication efforts, and did not respond to student comments in proactive ways. Teachers requested more communication models and varied formats to use to communicate with students. Students in all classes reported that they wished teachers knew them better.

Statements made by teachers on the survey indicate that their teaching plans may have changed as a result of the information exchange with students. As teachers used the system, they became more positive about its use and the value of getting to know students to shape plans. Data also indicate that teachers might become more aware of the needs of individual students through use of the system. Although changes in plans or teaching was not actually observed, the teachers' positive comments about the usefulness of the information derived from the system indicates that the Learning Expressways Communication System may be a useful tool for some teachers.

Unfortunately, this study did not provide information about the impact of the Learning Expressways System on students with disabilities. A major problem was the small number of students with disabilities enrolled in general education courses. This problem was similar to the problem encountered by researchers at the Institute for Academic Access while conducting other

studies. In the current study, this problem was compounded by the fact that through the quirks of random assignment, none of the participating students with disabilities were able to try out the Learning Expressways System because they were enrolled in control classes. This suggests three recommendations for future studies. First, more general education classrooms must be involved to increase the sample size of students with disabilities. Second, follow-up studies should probably involve interviews with open-ended questions at the end of the study to obtain more information about students' perceptions, especially for students with disabilities who are in both general and special education classes. More specifically, they should be asked to compare and contrast their perceptions of those two classroom environments. The third recommendation would involve use of time-series analysis of teacher-student responses on the Comment Sheets to evaluate changes in affect and content over time, especially for students with disabilities.

To conclude, the LE Communication System was found to be a viable communication option; however, findings suggested that improved results might be obtained with greater teacher consistency in using the system, the inclusion of a more explicit teaching routine for reviewing student information and responses and providing student feedback, and the use of more varied formats for communicating with students. In general, this study was an excellent initial field-test and feasibility study of the Learning Expressways System. It provided information about needed changes in the training process and folder system and modifications needed for subsequent research studies. Teachers and students liked the Learning Expressways System; it just needs to be used over a longer period of time and the quality of teacher responses to student initiations needs to be improved.

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Table 1

Comparison of General Education and Special Education Teacher and Student Responses

General Education Teachers in General Education Classes (mean scores)	General Education Students in General Education Classes (mean scores)	Special Education Teachers in Special Education Classes (mean scores)	Special Education Students in Special Education Classes (mean scores)	Being Known Items
4.13	3.88	4.00	4.07	1. How satisfied are you with the way that this teacher respects how you are different from other students?
3.50	3.57	4.00	3.79	2. How satisfied are you with the way this teacher changes his or her teaching when you have difficulty learning?
3.81	3.85	3.67	3.76	3. How satisfied are you with the way this teacher answers your questions?
3.56	3.77	3.67	3.97	4. How satisfied are you with the opportunities that this teacher gives you to explain academic problems or concerns?
3.88	3.72	4.00	3.93	5. How satisfied are you with the way this teacher responds to your academic problems or concerns?
3.69	3.76	3.33	4.00	6. How satisfied are you with the interest that this teacher shows toward you?
3.38	3.85	3.67	3.76	7. How satisfied are you with the opportunities that this teacher gives you to ask questions?
3.50	2.92	3.67	3.24	8. How likely is it that you would share an in-school problem with this teacher?
3.06	2.66	3.33	3.28	9. How likely is it that you would share an out-of-school problem with this teacher?
3.31	2.97	3.67	3.76	10. How likely is it that this teacher knows your goals for the future?
4.00	3.09	3.67	3.55	11. How likely is it that this teacher knows your strengths and weaknesses?
3.19	2.76	3.67	3.45	12. How likely is it that this teacher understands the struggles and successes that you face in your life?

Table 1, continued

2.94	2.73	2.67	3.38	13. How likely is it that you would let this teacher know if you felt alone or rejected by others?
2.38	2.41	2.67	3.24	14. How likely is it that you would let this teacher know if you were thinking about doing something harmful or illegal?
2.94	2.83	3.00	3.68	15. How likely is it that you would let this teacher know you were worried over how much trouble you were getting into during school?
3.19	2.85	3.33	3.45	16. How likely is it that you would let this teacher know if you were really angry at others and did not know what to do?
2.56	2.67	2.67	2.31	17. How often does this teacher ask for your ideas about how to improve his or her teaching?
3.63	2.53	4.00	2.41	18. How often do you let this teacher know about a problem that concerns you?

Table 2

Comparison of Responses of General Education Students to Students Receiving Special Education Services in General and Special Education Classrooms

General Education Students in General Education Classes (mean scores)	Special Education Students in General Education Classes (mean scores)	Special Education Students in Special Education Classes (mean scores)	Being Known Items
3.88	3.70	4.07	1. How satisfied are you with the way that this teacher respects how you are different from other students?
3.57	3.45	3.79	2. How satisfied are you with the way this teacher changes his or her teaching when you have difficulty learning?
3.85	3.85	3.76	3. How satisfied are you with the way this teacher answers your questions?
3.77	3.35	3.97	4. How satisfied are you with the opportunities that this teacher gives you to explain academic problems or concerns?
3.72	3.60	3.93	5. How satisfied are you with the way this teacher responds to your academic problems or concerns?
3.76	3.55	4.00	6. How satisfied are you with the interest that this teacher shows toward you?
3.85	3.45	3.76	7. How satisfied are you with the opportunities that this teacher gives you to ask questions?
2.92	3.00	3.24	8. How likely is it that you would share an in-school problem with this teacher?
2.66	2.90	3.28	9. How likely is it that you would share an out-of-school problem with this teacher?
2.97	3.05	3.76	10. How likely is it that this teacher knows your goals for the future?
3.09	2.95	3.55	11. How likely is it that this teacher knows your strengths and weaknesses?
2.76	2.65	3.45	12. How likely is it that this teacher understands the struggles and successes that you face in your life?
2.73	3.10	3.38	13. How likely is it that you would let this teacher know if you felt alone or rejected by others?
2.41	2.60	3.24	14. How likely is it that you would let this teacher know if you were thinking about doing something harmful or illegal?
2.83	2.90	3.68	15. How likely is it that you would let this teacher know you were worried over how much trouble you were getting into during school?
2.85	3.00	3.45	16. How likely is it that you would let this teacher know if you were really angry at others and did not know what to do?
2.67	3.11	2.31	17. How often does this teacher ask for your ideas about how to improve his or her teaching?
2.53	2.50	2.41	18. How often do you let this teacher know about a problem that concerns you?

Table 3

Student and teacher responses

	Student Responses			Teacher Responses		
	Type of Response			*Type of Response*		
	Instructional	**Non-Instructional**	**Total**	**Instructional**	**Non-Instructional**	**Total**
Positive Affect	3.80%	31.94%	35.74%	16.77%	47.05%	63.82%
Neutral Affect	29.26%	22.31%	51.57%	13.20%	19.57%	32.97%
Negative Affect	3.33%	9.35%	13.61%	1.09%	2.33%	3.42%
Total	36.39%	63.61%		31.06%	68.95%	

Appendix A

STUDENT BEING KNOWN QUESTIONNAIRE

Name: _____ Date: _____

All of the questions below relate to how well the teacher of this class knows you. No one will be able to match your name to your answers, so you can be completely honest.

What is your teacher's name? _____

****

Directions: For each question, circle the answer from "A" to "E" that best shows what you think.

In the example below, if you feel neither satisfied nor dissatisfied with the cold and rainy weather, you would circle the letter "C".

Example: How satisfied are you with cold and rainy weather?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

****

Answer each question by filling in the letter on the accompanying answer form that best shows what you think. Please answer all questions.

1. How satisfied are you with the way that this teacher respects how you are different from other students?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

2. How satisfied are you with the way this teacher changes his or her teaching when you have difficulty learning?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

3. How satisfied are you with the way this teacher answers your questions?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

4. How satisfied are you with the opportunities that this teacher gives you to explain academic problems or concerns?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

5. How satisfied are you with the way that this teacher responds to your academic problems or concerns?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

6. How satisfied are you with the interest that this teacher shows toward you?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

7. How satisfied are you with the opportunities that this teacher gives you to ask questions?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

8. How likely is it that you would share an in-school problem with this teacher?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

9. How likely is it that you would share and out-of-school problem with this teacher?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

10. How likely is it that this teacher knows your goals for the future?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

11. How likely is it that this teacher knows your strengths and weaknesses?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

12. How likely is it that this teacher understands the struggles and successes that you face in your life?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

13. How likely is it that you would let this teacher know if you felt alone or rejected by others?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

14. How likely would it be that you would let this teacher know if you are thinking about doing something harmful or illegal?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

15. How likely is it that you would let this teacher know that you were worried over how much trouble you were getting into during school?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

16. How likely is it that you would let this teacher know if you were really angry at others and did not know what to do?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

17. How often does this teacher ask for your ideas about how to improve his or her teaching?

Never	More Than Monthly	Monthly	Weekly	Daily
A	B	C	D	E

18. How often does this teacher you know about a problem that concerns you?

Never	More Than Monthly	Monthly	Weekly	Daily
A	B	C	D	E

19. What grade do you expect to get in this class? A B C D or F ?

Appendix B:
TEACHER BEING KNOWN QUESTIONNAIRE

Name: _____ Date: _____

Which class are you describing? _____ Class period? _____

All of the questions below relate to your interactions with the students in this class.

****

Directions: For each question, circle the answer from "A" to "E" that best shows what you think.

In the example below, if you feel neither satisfied nor dissatisfied with the cold and rainy weather, you would circle the letter "C".

Example: How satisfied are you with cold and rainy weather?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

****

Answer each question by filling in the letter on the accompanying answer form that best shows what you think. Please answer all questions.

1. How satisfied are you with the way that you respect differences among your students?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

2. How satisfied are you with the way you change your teaching when students are having difficulty learning?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

3. How satisfied are you with the way you answer your student's questions?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

4. How satisfied are you with the opportunities that you give your students to explain academic problems or concerns?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

5. How satisfied are you with the way you respond to your students' academic problems or concerns?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

6. How satisfied do you think your students are with the interest that you show toward them?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

7. How satisfied do you think your students are with their opportunities to ask you questions?

Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
A	B	C	D	E

8. How likely is it that your students would share an in-school problem with you?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

9. How likely is it that your students would share and out-of-school problem with you?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

10. How likely is it that you know your students' goals for the future?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

11. How likely is it that you know your students' strengths and weaknesses?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

12. How likely is it that you understand the struggles and successes that your students face in their lives?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

13. How likely would it be that one of your students would let you know if the student felt alone or rejected by others?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

14. How likely would it be that one of your student would let you know if he/she was thinking about doing something harmful or illegal?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

15. How likely would it be that one of your students would let you know that he/she was worried over how much trouble that students was getting into during school?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

16. How likely would it be that one of your students would let you know that he/she is really angry with others and does not know what to do?

Very Unlikely	Unlikely	Neither Likely Nor Unlikely	Likely	Very Likely
A	B	C	D	E

17. How often do you ask students for their ideas about how to improve your teaching?

Never	More Than Monthly	Monthly	Weekly	Daily
A	B	C	D	E

18. How often does one of your students let you know about a problem that concerns him/her?

Never	More Than Monthly	Monthly	Weekly	Daily
A	B	C	D	E

Appendix C

BEING KNOWN QUESTIONNNIARE

Student Versus Teacher Comparison

The following questions are from the student version of the Being Known Survey, which asks students to evaluate how well the teacher of their class knows them. The answers were compared to the teacher version of the Being Known Survey in which 17 teachers responded to how they thought they were doing on each item in that class.

An asterisk * is placed by items that showed a statistically significant difference at a .05 level.

Answer each question by filling in the letter on the accompanying answer form that best shows what you think. Please answer all questions.

Items rated from 1-Very Dissatisfied to 5-Very Satisfied

1. How satisfied are you with the way that this teacher respects how you are different from other students?
   - Mean Teacher Rating: 4.13 Mean Student Rating: 3.78

2. How satisfied are you with the way this teacher changes his or her teaching when you have difficulty learning?
   - Mean Teacher Rating: 3.59 Mean Student Rating: 3.76

3. How satisfied are you with the way this teacher answers your questions?
   - Mean Teacher Rating: 3.76 Mean Student Rating: 4.04

4. How satisfied are you with the opportunities that this teacher gives you to explain academic problems or concerns?
   - Mean Teacher Rating: 3.59 Mean Student Rating: 3.80

5. How satisfied are you with the way this teacher responds to your academic problems or concerns?
   - Mean Teacher Rating: 3.94 Mean Student Rating: 3.82

6. How satisfied are you with the interest that this teacher shows toward you?
   - Mean Teacher Rating: 3.65 Mean Student Rating: 3.78

7. How satisfied are you with the opportunities that this teacher gives you to ask questions?
   - Mean Teacher Rating: 3.41 Mean Student Rating: 3.66

Items rated from 1-Very Unlikely to 5-Very Likely

8. *How likely is it that you would share an in-school problem with this teacher?
   - Mean Teacher Rating: 3.53 Mean Student Rating: 2.92

9. How likely is it that you would share an out-of-school problem with this teacher?
   - Mean Teacher Rating: 3.06 Mean Student Rating: 2.80

10. How likely is it that this teacher knows your goals for the future?
    - Mean Teacher Rating: 3.35 Mean Student Rating: 3.20

11. *How likely is it that this teacher knows your strengths and weaknesses?
    - Mean Teacher Rating: 3.95 Mean Student Rating: 3.10

12. How likely is it that this teacher understands the struggles and successes that you face in your life?
    - Mean Teacher Rating: 3.24 Mean Student Rating: 2.78

13. How likely is it that you would let this teacher know if you felt alone or rejected by others?
    - Mean Teacher Rating: 2.94 Mean Student Rating: 2.92

14. How likely is it that you would let this teacher know if you were thinking about doing something harmful or illegal?
    - Mean Teacher Rating: 2.41 Mean Student Rating: 2.39

15. How likely is it that you would let this teacher know you were worried over how much trouble you were getting into during school?
    - Mean Teacher Rating: 3.00 Mean Student Rating: 2.88

16. How likely is it that you would let this teacher know if you were really angry at others and did not know what to do?
    - Mean Teacher Rating: 3.29 Mean Student Rating: 2.88

17. How often does this teacher ask for your ideas about how to improve his or her teaching?

Never	More Than Monthly	Monthly	Weekly	Daily
1	2	3	4	5

- Mean Teacher Rating: 2.53 Mean Student Rating: 2.50

18. *How often do you let this teacher know about a problem that concerns you?

Never	More Than Monthly	Monthly	Weekly	Daily
1	2	3	4	5

- Mean Teacher Rating: 3.69 Mean Student Rating: 2.49

Appendix D

Teacher Name _____ **School**_____

Learning Expressways Feedback Survey

Directions: Please take a few moments to complete this form and bring it with you to the Mid-Point Check Session. You may wish to refer to your weekly *Teacher Self-Reflection Forms* to respond to some of the questions.

1. How has Learning Expresways changed your planning?
   _____
   _____
2. What value does the use of the Learning Expressways have for you so far?
   _____
   _____
3. In what other ways has Learning Expressways impacted your teaching?
   _____
   _____
4. What features of the Learning Expressways process are working?
   _____
   _____
5. What changes in the Learning Expressways process would you suggest?
   _____
   _____
6. What changes to the Learning Expressways folder format would you suggest?
   _____
   _____

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